TDI | Texas Department of Insurance

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Product Evaluation

LVR23 | 0919

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: LVR-23

Effective Date: September 1, 2019
Re-evaluation Date: September 2023

Product Name: Model DC-5704 Aluminum Louvers, Impact Resistant

Manufacturer: Construction Specialties, Inc.
49 Meeker Avenue
Cranford, NJ 07016
(800) 526-6930

General Description:

Model DCH-5704 (Horizontal): The frame is constructed of extruded aluminum. The head is square-cut and butted to the jambs, secured with two (2) #10 x 1-1/2" pan head screws. At the sill, the jambs are square-cut and butted onto the sill, secured with two (2) #10 x 1-1/2" long pan head screws. The louver assembly consisted of thirty-eight (38) 144" wide by 2-5/16" high, 0.060" thick, extruded aluminum blades. The blades are attached to vertical jambs with two (2) #10 x 1-1/2" long pan head screws at each blade end.

Model DCV-5704 (Vertical): The frame is constructed of extruded aluminum. The head is square-cut and the jambs are butted onto the head, secured with two (2) #10 x 1-1/2" pan head screws. The sills are square-cut, and the jambs are butted onto the sill, secured with two (2) #10 x 1/12" long pan head screws. The louver assembly consist of thirty-eight (38) 144" wide by 2-5/16" high, 0.060" thick, extruded aluminum blades. The blades are attached to the head and sill with two (2) #10 x 1-1/2" long pan head screws at each blade end.

Design Drawings:
Construction Specialists, Inc. drawing; developed by the CS Group; drawing No. RD-1075; Sheets 1-8 of 8; dated October 02, 2008; Revised July 02, 2019; signed, sealed and dated August 08, 2019 by Gustave L. Schmoll, P.E. The stated drawing will be referred to as approved drawings in this report.

Limitations:
Wall Construction: The louvers may be mounted to the following types of wall framing:
Metal studs (minimum 16 gauge, Fy = 33ksi)
Concrete (minimum compressive strength 2,000 psi)
Structural steel (minimum 3/16" thick, Fy = 46 ksi).
Aluminum minimum 1/8" thick

These louvers have been designed and tested in accordance with TAS 201, TAS 202, and TAS 203 Large Missile Rated.

The louver is to be installed in a location where the room behind the louver is designed to drain water penetrating the room and the room will house water proof or water-resistant equipment, components or supplies.

Jamb clip spacing may not be altered. Each clip and fastener used must be detailed on the drawing.

Separation of unpainted aluminum and dissimilar materials to be maintained by the installer.

Panel Size: Maximum single panel size:
DCH-5704: 144" w x 78" h
DCV-5704: 78" w x 144" h.

Maximum Width: Panels may be stacked horizontally or vertically. Refer to the notes on Sheet 1 of the drawings.

Maximum Height: Panels may be stacked horizontally or vertically. Refer to the notes on Sheet 1 of the drawings.

Impact Resistance: The louver assembly satisfies the Texas Department of Insurance criteria for protection from windborne debris in both Inland I Zone and the Seaward Zone.

Table 1.

Model Number	Drawing Number	Sealed, Signature, Sheets
DC-5704	RD-1075 Rev. Dated 07-02-19	Sealed by Gustave L. Schmoll Sheets 1-8, of 8 dated August 08, 2019

Table 2.

Assembly	Maximum Single Section Width	Maximum Single Section Height	Allowable Design Pressure Rating
#1	12′-0″	6′-8″	±130.0 psf
#2	6′-8″	12′-0″	±130.0 psf
#3	6′-0″	12′-0″	±150.0 psf
#4	8′-0″	10′-0″	±150.0 psf

Table 3.

Louver Size versus Windload Table			
Louver dimension (parallel to blade length)	**Maximum Windload (psf)**	**Assembly**	**Number of Intermediate Blade Stiffeners**
6'-0" or less	+/-150	#3	0
6'-1/16" to 8'-0"	+/-150	#4	1
8'-1/16" to 12'-0"	+/-130	#1 & #2	2

Installation:

General:

All requirements specified in the IRC and the IBC must be satisfied and manufacturer's installation instructions followed, unless otherwise specified by this product evaluation.

It is be the responsibility of the structural engineer of record to verify the capacity of the structure to support the correct steel and concrete thickness.

Blade Support: Refer to the design drawings for requirements on blade support.

Product Identification: Each unit must bear a permanent label containing the manufacturer's name, series number of louvers, and applicable test standards.

Impact Resistance: These louver assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris. The louver assemblies passed an impact standard equivalent to Missile Level D specified in ASTM E 1996-04. The louvers may be installed at any height on the structure if the design pressure rating for the assemblies is not exceeded. These louver assemblies will not need to be protected with an impact protective system.

Acceptance of Smaller Assemblies: Louver assemblies with dimensions equal to or smaller than those specified above are acceptable within the limitations specified in this report.

Anchorage Method: The aluminum louvers must be installed in accordance with the approved drawings.

Note: Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.